

U.S. Patent Application Serial No. **10/516,941**

Response filed May 4, 2010

Reply to OA dated March 15, 2010

AMENDMENTS TO THE CLAIMS:

Please cancel claims 9 and 13-15 without prejudice or disclaimer, amend claims 10-12, as follows. This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Previously presented): A canister for preventing vehicle fuel vaporization, comprising:

a case containing a latent-heat storage type adsorbent composition,

the latent-heat storage type adsorbent composition comprising an adsorbent and a heat-storage material;

the adsorbent being in the form of granules or powder having pores, and being capable of adsorbing vehicle fuel vapor,

the heat-storage material comprising a microencapsulated phase-change material, the phase-change material absorbing or releasing latent heat in response to temperature change, wherein

the average particle diameter of the heat-storage material is about 1/1000 to about 1/10 of that of the adsorbent,

the average particle diameter of the adsorbent is about 1 μm to about 10 mm,

the average particle diameter of the heat-storage material is about 0.1 to about 500 μm ,

the specific surface area of the adsorbent is about 500 to about 2500 m^2/g ,

the diameter of the pores of the adsorbent is about 10 Å to about 50 Å, and

the content of the heat-storage material is about 10 to about 100 parts by weight based on 100 parts by weight of the adsorbent,

wherein the heat-storage material is adhered to and/or deposited on the surface of the adsorbent.

Claim 2 (Previously presented): A canister for preventing vehicle fuel vaporization according to Claim 1, wherein the adsorbent is activated carbon, activated alumina or a mixture thereof.

Claims 3-6 (Canceled).

Claim 7 (Previously presented): A canister for preventing vehicle fuel vaporization according to Claim 1, wherein the latent-heat storage type adsorbent composition is in a form of a molded article comprising the composition and a binder.

Claim 8 (Previously presented): A canister for preventing vehicle fuel vaporization according to Claim 7, wherein the molded article is in at least one shape selected from the group consisting of pellet, disc and block.

Claim 9 (Canceled).

Claim 10 (Currently amended): ~~A method for producing a latent-heat storage type adsorbent composition for canisters~~ The canister for preventing vehicle fuel vaporization according to Claim 1, wherein the heat-storage material is electrostatically adhered to and/or deposited on the surface of the adsorbent.

Claim 11 (Currently amended): ~~A method for producing a latent-heat storage type adsorbent composition for canisters~~ The canister for preventing vehicle fuel vaporization according to Claim 1, wherein the heat-storage material ~~and the~~ is adhered to and/or deposited on the surface of the adsorbent ~~[[are]]~~ by uniformly mixed mixing the heat-storage material with the adsorbent.

Claim 12 (Currently amended): ~~A method for producing a latent-heat storage type adsorbent composition for canisters~~ The canister for preventing vehicle fuel vaporization according to Claim 1, wherein the heat-storage material is adhered to and/or deposited on the surface of the adsorbent by obtaining a slurry ~~obtained~~ by suspending the heat-storage material in a liquid medium ~~is mixed and mixing~~ with the adsorbent, and ~~the mixture is then dried~~ then drying the slurry.

Claims 13-15 (Canceled).

Claim 16 (Previously presented): A canister for preventing vehicle fuel vaporization according to Claim 1, wherein the latent-heat storage type adsorbent composition for canisters is obtained by a method comprising:

suspending the heat-storage material in a liquid medium to give a slurry, and
spraying a liquid mixture containing the slurry and, if necessary, a binder, on the surface of the vehicle fuel vapor adsorbent.

Claim 17 (Canceled).

Claim 18 (Previously presented): A canister for preventing vehicle fuel vaporization according to Claim 1, wherein the latent-heat storage type adsorbent composition for canisters is obtained by a method comprising:

molding a heat-storage material to produce a molded article, and
uniformly mixing the adsorbent and the molded article.

Claim 19 (Previously presented): A canister for preventing vehicle fuel vaporization according to claim 1, wherein the latent-heat storage type adsorbent composition for canisters is obtained by a method comprising:

uniformly mixing a vehicle fuel vapor adsorbent, the heat storage material, the heat storage material being a powder or a slurry suspending the powdery heat storage material in the liquid medium, a binder and water, and

molding the resultant mixture to form a desired shape.

Claim 20 (Previously presented): A canister for preventing vehicle fuel vaporization, comprising:

a case containing a latent-heat storage type adsorbent composition,

the latent-heat storage adsorbent composition comprising an adsorbent and a heat-storage material;

the adsorbent being in the form of granules, powder or pellets having pores, and being capable of adsorbing vehicle fuel vapor,

the heat-storage material comprising a microencapsulated phase-change material, the phase-change material absorbing or releasing latent heat in response to temperature change, wherein

the average particle diameter of the heat-storage material is about 1/1000 to about 1/10 of that of the adsorbent,

the average particle diameter of the adsorbent is about 1 μm to about 10 mm,

the average particle diameter of the heat-storage material is about 0.1 to about 500 μm ,

the specific surface area of the adsorbent is about 500 to about 2500 m^2/g ,

the diameter of the pores of the adsorbent is about 10 \AA to about 50 \AA , and

the content of the heat-storage material is about 10 to about 100 parts by weight based on 100 parts by weight of the adsorbent,

wherein the latent-heat storage type adsorbent composition for canisters is obtained by a method comprising:

molding a heat-storage material to produce a molded article, and
uniformly mixing the adsorbent and the molded article.

Claim 21 (Previously presented): A canister for preventing vehicle fuel vaporization according to claim 20, wherein the adsorbent is activated carbon, activated alumina or a mixture thereof.

Claim 22 (Previously presented): A canister for preventing vehicle fuel vaporization according to claim 20, wherein the latent-heat storage type adsorbent composition is in the form of a molded article comprising the composition and a binder.

Claim 23 (Previously presented): A canister for preventing vehicle fuel vaporization according to claim 20, wherein the molded article is in at least one shape selected from the group consisting of pellet, disc and block.